

Amendments to the Drawings

A replacement sheet for drawing FIG. 1 is attached with this paper. The drawing has been revised to include a label indicating the generator 40, and the reference numeral "105" has been changed to --106--.

REMARKS

The Office Action dated January 31, 2007 has been received and carefully considered. The above amendments and the following remarks are being submitted as a full and complete response to the Office Action.

With respect to the objections to the drawings, a replacement sheet for drawing FIG. 1 is attached with this paper. As the Examiner requested, the drawing has been revised to includes a label indicating the generator 40, and the reference numeral "105" has been changed to --106--.

With respect to the claimed features of a wind direction measuring means and a duct slope control means, these features have been canceled from claims 3 and 5, which now simply states that, in accordance with the present invention, an angle of slope of the duct axis with respect to a measured wind direction is made equal to or less than 10 degrees.

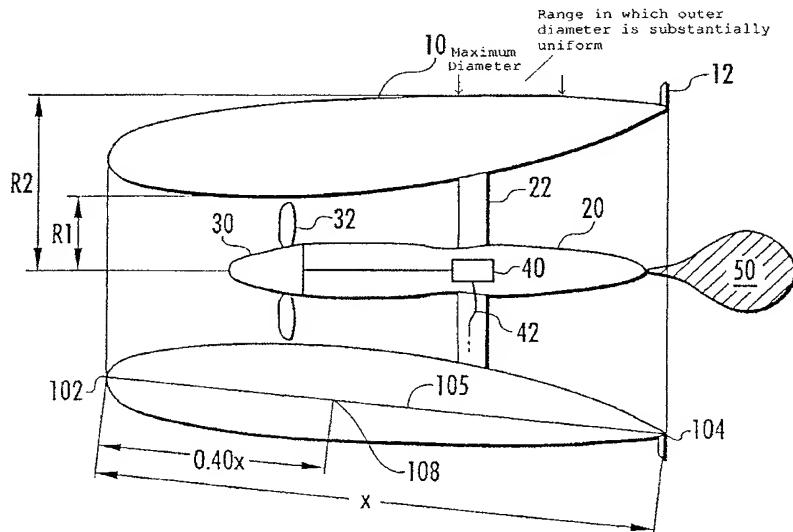
Claim 1 was rejected under 35 U.S.C. § 102(b) as being anticipated by Igra (U.S. Patent No. 4,132,499).

Claim 1 has been amended to distinguish structurally from the disclosed driven energy-generating device of Igra.

More specifically, as is apparent from the annotated view of Figure 1 provided in the current office action, according to Igra, the maximum outer diameter of the duct 10 occurs precisely at the rear end of the duct. That is, the outer diameter of the duct 10 increases steadily in a

direction toward the rear of the duct until reaching its maximum at the very rear end point.

By contrast, in the claimed invention, as shown below, the outer diameter of the duct (10) becomes maximum at a position forward of the rear end of the duct (10) and rearward of the maximum wing thickness position. Further, the outer diameter of the duct (10) is made approximately uniform within a range lying between the maximum outer diameter position and the rear end of the duct (10).



As noted in the present specification, owing to the shape of the duct (10), wind flows easily toward the rear side of the duct (10), enabling the creation of a reduced pressure region (50) while inhibiting generation of a vortex at the rear end portion of the duct (10). Thereby, due to creation of the reduced

pressure region (10), it is possible to increase wind speed in the inner portion of the duct (10).

Claim 2 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Igra.

The Examiner contends that the flap (circular wing 40) shown by Igra corresponds to the claimed flap plate. Initially, the Examiner admits that Igra does not disclose the numerical range for the width of the claimed flap plate. Secondly, as claimed, in the present invention, the flap plate protrudes in an outer *diametrical* direction, i.e., such that the annular flap plate protrudes and extends substantially perpendicularly to the duct axis.

By contrast the circular wing 40 of Igra does not extend perpendicularly to the duct axis.

Further, contrary to the Examiner's statement, the existence and design of the annular flap plate of the present invention is indeed for a specific purpose, and provides an important advantage. As noted in the present specification, owing to the presence of the flap plate, it is possible to inhibit a collision in the rear side of the duct between the wind in the inner side of the duct ("inside wind"), and the wind in the outer side of the duct ("outside wind"). Accordingly, it is possible to inhibit a drawback that the flow of the inside wind is disturbed by an irregular flow of the outside wind, and the pressure reduction region generated from the rear portion of the duct towards the rear side disappears, whereby the power generating efficiency is lowered.

These features and advantages are not attainable by the non-perpendicularly disposed circular wing 40 shown in Igra.

Accordingly, in addition to all of the reasons pertaining to claim 1, claim 2 is separately allowable in light of the amendments and reasons given above.

Claims 3 and 5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Igra taken further in view of EP 0 045 202.

The European reference has been cited as allegedly teaching use of horizontal and vertical stabilizers 6 and 3a, which orient the wind generator so as to be aligned with the wind direction. It does not appear, however, that the European reference has any means or step for measuring the wind direction, or of controlling the slope angle of a duct axis with respect to a measured wind direction, as currently claimed. In addition, as dependent claims, claims 3 and 5 are allowable at least for the same reasons as the independent claim.

Claims 4 and 6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Igra taken further in view of Uzzell, Jr. (U.S. Patent No. 3,883,750).

The Examiner contends that FIG. 2 of Uzzell shows impeller vanes formed by cutting an approximate oval approximately in parallel to a short axis into a shape which is shortened from an end in a long axial direction, and wherein a ratio of a length in the long axial direction of the vane with respect to a long diameter of the approximate oval is within a range between 0.82 and 0.87.

It is unclear to the applicant how the Examiner is interpreting Uzzell as showing the claimed features. In Uzzell, it is simply unclear how the blades 46 are formed, or if they are cut, or the manner in which the blades are attached to the impeller hub.

In addition, as dependent claims, claims 4 and 6 are allowable at least for the same reasons as the independent claim.

For the foregoing reasons, it is respectfully submitted that the claimed invention is not anticipated and would not have been obvious to a person skilled in the art at the time the present invention was made. Reconsideration and withdrawal of the rejections, with allowance of pending claims 1 to 6 is respectfully requested.

No additional fees are currently due. Notwithstanding, in the event that fees, or deficiencies in fees, are deemed necessary in connection with this or any accompanying communication, such fees may be charged to the Attorney's Deposit Account No. 07-2519.

Respectfully submitted,



Paul A. Guss
Reg. No. 33,099
Attorney for Applicants

CS-28-051212-PCT
775 S. 23rd St. #2
Arlington, VA 22202
Tel. 703-486-2710